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TRACKING tele frauds

A focussed effort at developing and acquiring software products targetted at telecom revenue maximization has made Subex one of India's biggest IT product companies. Some of its products are today world leaders in the space

Sujit John | TNN

Nikira is a word not many would have heard before. But if you are an Airtel or Vodafone customer, Nikira is the reason why you can be reasonably confident that somebody isn't fraudulently accessing your sim card information to make calls. It's also the reason why those operators are able to weed out many other kinds of fraudsters from the system. In other words, Nikira — Sanskrit for attentive or vigilant — is one of the big reasons why you don't get inflated bills and your tariffs remain reasonable; the software stands 'vigilant' against frauds.

There's more to Nikira. It's the No.1 fraud management solution in the world with more than 130 operator installations across the globe, with Canada's top wireless phone company Telus being its biggest customer. And it's the reason why Subex is today one of India's biggest homegrown software product companies.

In 1999, when Subex founders Subash Menon and Alex P J decided to move away from their seven-year-old telecom hardware integration business to developing a software product, it was to the telecom fraud management space that they first looked. The work basically involved configuring hundreds of rules into the system that would help to flag alerts about possible frauds. A rule could be something like: 'Send an alert if a new subscriber makes 10 international calls on the very first day' or 'Send an alert if no call originates or is made from the home number provided in the application form within a month of a new subscription'. If an alert comes, the matter is sent for investigation by a fraud analyst. And the system provides all the info the analyst needs.

Nikira (it was actually first christened Ranger) came with other strengths too. The solution was architected to be agnostic to the network, so it could be used with normal voice networks, GSM, CDMA, IP or any other. Subex also developed a software that could translate any kind of data record (ASCII, binary, TAP etc) into a language Nikira could understand.

Over time, more strengths were built in. There came the cognitive analytics program — a combination of statistical, probabilistic and neural algorithms — that gives the probability that an alert is actually a fraud. If the probability is high, it's clearly a message to investigate quickly. Today, the solution can alert you if a fraudster by the name, say, Thomas, who was thrown out by the operator tries to re-enter the system under another name like, say, Tom; and also give you the probability that it's the same guy.

It can alert you to new generation frauds like SIM cloning, where your SIM card is cloned and used elsewhere. Nikira maps the latitude and longitude of cell sites and if you make a call from Bangalore at 10 am and there's a call from the cloned SIM at 10.15 am from Mysore, the solution will immediately recognize it as physically impossible and put out an alert. It understands efforts by fraudsters to crack the pincode for international calls in a EPBX box, because such fraud typically involves a number of short calls, followed by long international calls.

"The base of the system has remained the same since 1999. But we are continuously re-architecting it to ensure we can quickly bring rule engines for newer kinds of frauds," says Anuradha, senior VP - engineering in Subex, explaining the success of the product against global competitors (even biggies like HP have products in the space). She says the solution has also proved to be enormously scalable, because it has been able to take the phenomenal increase in cellular numbers that India and the world have seen.

Moneta and more

But Nikira is not alone any longer. Menon and his brother Sudeesh Yezhuvath (Alex exited the venture in 2004) have pursued an aggressive overseas acquisition strategy that have helped build a strong suite of about 11 products in the area of, what may broadly be called, revenue maximization for telecom operators. Two of those acquisitions, UK-based Azure (in 2006) and Canada-based Syndesis (in 2007), were also the two biggest overseas acquisitions by an Indian firm in the software space at the time.

Azure brought in more strengths in fraud management, and also helped Subex enter the revenue assurance area. A product called Moneta, another world leader, identifies revenue leakages such as when information is wrongly configured — say, a new subscriber is to be given a discount for his first 100 calls, but this is wrongly configured as the first 1,000 calls. Another product called True Source discovers the network elements, what is configured on them and how much of the elements are not fully utilized. This helps to ensure operators don't overinvest in equipment like routers and switches.

"Earlier, third-party organizations would be called in to manually audit such losses through their own tools. This would be a recurring expenditure. Our products help to fully automate the process," says Anuradha.

Menon says deliberate frauds typically account for about 4% of an operator's revenues, while leakages on account of poor optimization and wrong configuration is about 8%. "That's a total of 12% of revenues lost," he says, explaining why his product suite is so important to telecom. No other organization, he says, has the breadth of revenue maximization products that Subex does. Which explains OSS Observer Billing and Customer Care's identification of Subex as a market leader with 20% share in the fraud and revenue assurance market in its May 2007 review.

With Syndesis, Menon today also has service fulfilment products like NetP, which automatically configures all the network equipment to enable a new broadband connection. Subex has already added new features to this product. Where it supported only the IBM Informix database earlier, it now supports Oracle and Microsoft databases too. Work is also on to tailor the product for tier II and III clients, by building a smaller version where deployment cost is lower.

People matters

Like in most successful product companies, people are what has made the difference in Subex too. Anuradha says Sudeesh has played a critical role in architecting the solutions. "He's a sales guy, but he has a good sense of what needs to go into the system," she says. Down the line, she says, people are as good as anywhere in the world in their technical skills, ideas and will to succeed.

The only problem is domain knowledge. Overseas you have people who have been in the domain for 20 years or more. Here it's far less. "Only when you understand the domain extremely well would you be able to translate it to a product," Anuradha says. But Subex is managing to overcome that problem partially through its acquisitions, which have brought in people with long years of experience, including the company's CTO Mark Nicholson.

Menon says he also finds professionals in India now wanting to move out of IT services companies into product companies. A point that Sanjay Paul Antony, senior VP, HR, echoes. "Even those in other MNC product companies in India are keen to work for us. The problem in those companies is the Indian operation is typically working on only a part of the product, the core work is done overseas. So it's never very satisfying for employees. In Subex, the core work is here, and engineering guys get to interact with everybody, including sales and product management guys," he says. "That gives a 'I'm making a difference' kind of feeling."

But he admits that getting talent is still difficult. Fortunately, most of the acquisitions look to be working, though each has been culturally very different. "We created detailed calendars for

each of the senior management here to meet with the senior management there. We gave frank answers to all questions asked, including about redundancies. We delivered on the commitments we made. All that's worked. When I first went to the Azure office, there was a lot of negativity, complaints. Today they look so charged up," says Antony.

But there's trouble brewing on another front. The US recession has pushed some of Subex's customers like AT&T to postpone capital expenditure. Subex is already into a net loss this year and has revised significantly downwards its revenue forecast for the year. Analysts who have been mostly upbeat about the company look a little less so now. If Menon and Yezhuvath overcome these challenges, India will probably have a great global multicultural product company going.

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ACQUISITIONS		
Company	Year of acquisition	Cost (\$ mn)
Syndesis	2007	164.5
Azure	2006	140.0
Mantas	2006	21
Lightbridge	2004	3.0
Alcatel Fraud		
Management Group	2004	3.6
Magardi	2001	3.0
IVth Generation	2000	5.5



Subash Menon grew up in Palakkad in Kerala. Set up Subex in Bangalore in 1992 with a Rs 20,000 loan from a former employer. Today, Subex is an over \$100 million company